

ABSTRACT OF THE DISCLOSURE

A method and apparatus is provided for producing near-diffraction-limited laser light, or amplifying near-diffraction-limited light, in diode pumped alkali vapor photonic-band-gap fiber lasers or amplifiers. Laser light is both substantially generated and propagated in an alkali gas instead of a solid, allowing the nonlinear and damage limitations of conventional solid core fibers to be circumvented. Alkali vapor is introduced into the center hole of a photonic-band-gap fiber, which can then be pumped with light from a pump laser and operated as an oscillator with a seed beam, or can be configured as an amplifier.